AMENDMENTS TO THE CLAIMS

LISTING OF CLAIMS

1 (Currently Amended). Reagent useful for diagnosing attention deficit hyperactivity disorder (ADHD), comprising a polynucleotide corresponding to a polymorphism in linkage disequilibrium with an allele of DRDR associated with individuals exhibiting ADHD.

2 (Currently Amended). The reagent of claim 1, wherein the polynucleotide corresponds to ~~the~~ a polymorphism that is closely linked to a DRD4 7R allele.

3 (Original). Reagent useful for diagnosing ADHD, comprising a polynucleotide corresponding to a marker the locus of which is within a block of linkage disequilibrium surrounding the DRD4 7R allele.

4 (Original). The reagent of claim 3, wherein the locus of the marker is within 100 kB of the DRD4 7R allele.

5 (Original). The reagent of claim 3, wherein the locus of the marker is within 50 kB of the DRD4 7R allele.

6 (Currently Amended). Reagent useful for diagnosing ADHD, comprising a pair of oligonucleotides corresponding to a locus in linkage disequilibrium with an allele of DRDR associated with individuals exhibiting ADHD.

7 (Currently Amended). The reagent of claim 6, wherein the pair of oligonucleotides corresponds to a locus closely linked to the DRD4 7R allele.

8 (Original). Reagent useful for diagnosing ADHD, comprising a pair of oligonucleotides corresponding to a marker the locus of which is within a block of linkage disequilibrium surrounding the DRD4 7R allele.

9 (Original). The reagent of claim 8, wherein the locus of the marker is within 100 kB of the DRD4 7R allele.

10 (Original). The reagent of claim 8, wherein the locus of the marker is within 50 kB of the DRD4 7R allele.

11 (Original). A method for diagnosing ADHD in an individual, comprising the steps of:

a) obtaining a tissue sample from the individual;

b) treating the sample so as to expose DNA present in the sample;

c) contacting the exposed DNA with a labeled DNA oligorner under conditions permitting hybridization of the DNA oligomer to any DNA complementary to the DNA oligomer present in the sample, the DNA complementary to the DNA oligomer containing the DRD4 7R allele;

d) removing unhybridized, labeled DNA oligomer; and

e) detecting the presence of any hybrid of the labeled DNA oligomer and DNA complementary to the DNA oligomer present in the sample, thereby detecting and diagnosing ADHD.

12 (Original). A method for diagnosing ADHD in an individual, comprising the steps of:

a) obtaining a tissue sample from the individual;

b) treating the sample so as to expose DNA present in the sample;

C) contacting the exposed DNA with a labeled DNA oligomer under conditions permitting hybridization of the DNA oligomer to any DNA complementary to the DNA oligomer present in the sample, the DNA complementary to the DNA oligomer containing a marker within a region of strong linkage disequilibrium to the DRM 7R allele;

d) removing unhybridized, labeled DNA oligomer; and

e) detecting the presence of any hybrid of the labeled DNA oligomer and DNA complementary to the DNA oligomer present in the sample, thereby detecting and diagnosing ADHD.

13 (Original). A method for diagnosing ADHD in an individual, comprising the steps of:

a) obtaining a tissue sample from the individual;

b) providing an oligonucleotide complementary to the sense strand of the DRD4 gene;

c) providing an oligonucleotide complementary to the antisense strand of the DRD4 gene;

d) treating the sample so as to expose DNA present in the sample;

e) contacting the exposed DNA with the oligonucleotides under conditions permitting amplification of the DRD4 gene;

f) sequencing the product of the amplification; and

g) detecting the presence of the DRD4 7R allele in the sample, thereby detecting and diagnosing ADHD.

14 (Original). A method for diagnosing ADHD in an individual, comprising the steps of:

a) obtaining a tissue sample from the individual;

b) providing an oligonucleotide complementary to the sense strand of a marker sequence found in an area of strong linkage disequilibrium with the DRD4 7R allele;

c) providing an oligonucleotide complementary to the antisense strand of the marker sequence;

d) treating the sample so as to expose DNA present in the sample;

e) contacting the exposed DNA with the oligonucleotides under conditions permitting amplification of the marker sequence;

f) sequencing the product of the amplification; and

g) detecting the presence of the marker sequence in the sample, thereby detecting and diagnosing ADHD.